

File handling routines for IRIS

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This document describes IDL routines for handling IRIS data files. They are particularly intended for users who do not have access to a local archive of IRIS data.

The \$IRIS_DATA environment variable

This variable should point to where the user's data files are stored, and it should be set in the .cshrc (or equivalent) or idl_startup.pro file. *The variable can contain multiple paths.*

Example for idl_startup.pro file:

```
setenv,'IRIS_DATA=$HOME/iris_data:/Volumes/DATA_DISK'
```

In this example the user has a data directory in his home directory, and another one on an external data disk. The software will search for files first in the home directory and then on the data disk.

Ingesting files

With \$IRIS_DATA we can automatically transfer an IRIS file into the correct location within the IRIS directory tree using the routine iris_ingest.pro:

```
IDL> iris_ingest, local_file [, index=index]
```

By default the routine will put the file in the first directory path listed in \$IRIS_DATA. If you want to put it in another path, you can use the optional input index=. For example, index=1 will put it in the *second* path (i.e., on the data disk in the example above). If you are not sure what the index numbers are, then do:

```
IDL> iris_ingest, /help
```

Downloading files from Oslo archive (OSDC)

When you download IRIS files from the Oslo archive, you can make use of \$IRIS_DATA by going to the download directory and doing:

```
IDL> iris_unpack_osdc, outfiles
```

```
IDL> iris_ingest, outfiles [, index=index]
```

iris_unpack_osdc deletes the downloaded tar file, and it also gunzips the individual files.

Finding files

With files correctly placed in the directory tree, you can find them from IDL using iris_find_file.pro. For example:

```
IDL> file=iris_find_file('29-Mar-2014 17:00')
```

By default this routine returns only the raster files, not the SJI files. To return the SJI files, use the keyword `/sji`. If the observation consists of multiple raster repeats, then the names of *all* of the individual files will be returned.

Finding a matching SJI file(s)

If you have found a raster file and you want to find the corresponding SJI files that were running at the time, you can do:

```
IDL> sji_files=iris_sji_match(file)
```